REAL NUMBERS

1. HCF of 8, 9, 25 is
    a. 8
    b. 9
    c. 25
    d. 1
2. Which of the following is not irrational?
    (a) $(2 – \sqrt{3})2$
    (b) $(\sqrt{2} + \sqrt{3})2$
    (c) $(\sqrt{2} -\sqrt{3})(\sqrt{2} + \sqrt{3})$
    (d)$2\sqrt{7}$
3. The product of a rational and irrational number is
    (a) rational
    (b) irrational
    (c) both of above
    (d) none of above
4. The product of two different irrational numbers is always
    (a) rational
    (b) irrational
    (c) both of above
    (d) none of above
5. The product of three consecutive positive integers is divisible by
    (a) 4
    (b) 6
    (c) no common factor
    (d) only 1

6. The largest number that will divide 398,436 and 542 leaving remainders 7,11 and 15 respectively is
   (a) 17
   (b) 11
   (c) 34
   (d) 45
7. There are 312, 260 and 156 students in class X, XI and XII respectively. Buses are to be hired to take these students to a picnic. Find the maximum number of students who can sit in a bus if each bus takes equal number of students
   (a) 52
   (b) 56
   (c) 48
   (d) 63
8. There is a circular path around a sports field. Priya takes 18 minutes to drive one round of the field. Harish takes 12 minutes. Suppose they both start at the same point and at the same time and go in the same direction. After how many minutes will they meet ?
   (a) 36 minutes
   (b) 18 minutes
   (c) 6 minutes
   (d) They will not meet
9. For some integer p, every even integer is of the form
   (a) $2p + 1$
   (b) $2p$

(c) p + 1

(d) p

10. The least number that is divisible by all the numbers from 1 to 5 (both inclusive) is

(a) 5

(b) 60

(c) 20

(d) 10

11. Casestudy

Two classmates Salma and Anil simplified two different expressions during the revision hour and explained to each other their simplifications.

Salma explains simplification of $\sqrt{2}/\sqrt{5}+\sqrt{3}$ by rationalising the denominator and Anil explains simplification of $(\sqrt{2}+\sqrt{3})(\sqrt{2}-\sqrt{3})$ by using the identity (a+ b) (a – b)

(1) What is the conjugate $\sqrt{5}+\sqrt{3}$

(a) $\sqrt{5}+\sqrt{3}$

(b) $\sqrt{5}-\sqrt{3}$

(c) $\sqrt{5}\times\sqrt{3}$

(d) None of the above

(2) By rationalising the denominator of $\sqrt{2}/\sqrt{5}+\sqrt{3}$ salma got the answer

(a) $\sqrt{2}/\sqrt{5}-\sqrt{3}$

(b) $\sqrt{2}(\sqrt{5}-\sqrt{3})/2$

(c) $\sqrt{5}-\sqrt{3}$)

(d) *None of the above*

(3) Anil applied ------- identity

(a) (a+b)(a-b)
(b) (a+b)(a+b)
(c) (a – b)(a- b)
(d) None of the above

(4) $(\sqrt{2} + \sqrt{3})(\sqrt{2} - \sqrt{3}) =$ -------

(a) 1
(b) 2
(c) -1
(d) None of the above

ANSWER

Q1 D

Q2 C

Q3 C

Q4 D

Q5 B

Q6 A

Q7 A

Q8 A

Q9 B

Q10 B

Q11 (1) B

(2) B

(3) A

(4) C